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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,168	12/05/2000	Jun Takahashi	108053	6589

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Oliff & Berridge PLC  
P.O. Box 19928  
Alexandria, VA 22320

EXAMINER

SHEWAREGED, BETELHEM

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 07/16/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-12

**Office Action Summary**

Application No.

09/729,168

Applicant(s)

TAKAHASHI ET AL.

Examiner

Betelhem Shewareged

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

### **DETAILED ACTION**

1. Applicant's response filed on 04/22/2003 has been fully considered. Claim 7 is added, and thus claims 1-7 are pending.

### ***Claim Rejections - 35 USC § 103***

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamoto et al. (US 6,139,940) in view of Asano et al. (EP 0 818 322 A1).

Iwamoto discloses an ink jet recording sheet having a substrate, an ink absorbing layer onto the substrate, and an ink permeable layer onto the ink absorbing layer (abstract). The substrate may be transparent (col. 2, line 56). The ink permeable layer comprises inorganic pigments and a resin (col. 2, line 35). Examples of the resin are acrylic, polyester, polyurethane, styrene-butadiene, vinyl acetate, vinyl chloride, and polyvinyl butyral (col. 2, lines 40-46). Iwamoto fails disclose a resin having a glass transition temperature as claimed.

Asano teaches an ink jet recording sheet having a substrate, an ink receiving layer on the substrate, and a gloss layer on the ink receiving layer (page 3, lines 5-8). The ink receiving layer is equivalent to the claimed ink absorbing layer, and the gloss layer is equivalent to the claimed ink permeable layer. The gloss layer comprises a pigment and a resin, and is porous and ink permeable (page 5, line 43-46). The resin has a glass transition temperature of 40°C or more, preferably 50-100 °C (page 6, line 36). Examples of the resin are polyvinyl alcohol, acrylic, polyurethane, vinyl acetate, vinyl chloride, and acrylamide (page 5, line 56 thru page 6, line 10).

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Iwamoto and Asano are analogous art because they are from the same field of endeavor that is the ink jet recording art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the ink permeable layer of Asano with the invention of Iwamoto in order to optimize the porosity of the gloss layer which in turn controls the ink absorbing properties of the layer (page 6, lines 36-44 of Asano).

With respect to the hardness value it is elementary that the mere recitation of newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. *In re swinehart et al.*, 169 USPQ 226 at 229. Since the Asano reference teaches Applicant's claimed compositional limitations of the ink permeable layer, it is inherent that the reference gloss layer function in the same manner claimed by Applicant. The burden is upon Applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

### ***Response to Arguments***

3. Applicant's argument is based on that the Office Action has failed to provide a basis in fact and/or technical reasoning to reasonably support that Asano's binder resin inherently has the claimed Shore D hardness. This argument is not found persuasive because the Examiner has provided a technical reasoning to show that Asano's binder resin inherently has the claimed Shore D hardness. The technical reasoning is further elaborated as follow: In view of the specification, the characteristics of the binder to

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make the claimed ink permeable layer are recited in page 5, lines 3-10, and the examples of binder resins that have those characteristics are disclosed in page 5, lines 11-19. According to the specification, any of the binder resins that are disclosed in page 5, lines 11-19 possess the claimed glass transition temperature (T<sub>g</sub>) and Shore D hardness. The Examiner searched for any of those binder resins disclosed in page 5, lines 11-19, and even searched for any of those binder resins disclosed in page 5, lines 11-19 along with the claimed T<sub>g</sub>. Therefore, since at least some of Asano's resins are substantially identical to the binder resins disclosed in page 5, lines 11-19, and have the claimed T<sub>g</sub>, Asano's resins inherently possess the claimed Shore D hardness.

For the above reason and since Applicant fails to provide factual evidence showing that Asano's resins do not possess the claimed Shore D hardness, claims 1-6 stand rejected.

4. Claims 1, 2 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al (US 5,027,131) in view of Asano et al. (EP 0 818 322 A1).

Hasegawa teaches a recording medium having a transparent substrate, an ink retaining layer on the substrate, and an ink transporting layer on the ink retaining layer (abstract and col. 4, line 1). The ink retaining layer is equivalent to the claimed ink absorbing layer, and the ink transporting layer is equivalent to the claimed ink permeable layer. The ink transporting layer comprises particles having a preferred particles size of 0.5-20 um and a binder (col. 4, line 54). Examples of the binder are polyvinyl acetate, polyacrylamide, polyvinylidene chloride polyvinyl alcohol, styrene-

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butadiene, and polyurethane (col. 6, lines 5-15). Hasegawa fails to disclose a resin having a glass transition temperature as claimed.

Asano teaches an ink jet recording sheet having a substrate, an ink receiving layer on the substrate, and a gloss layer on the ink receiving layer (page 3, lines 5-8). The ink receiving layer is equivalent to the claimed ink absorbing layer, and the gloss layer is equivalent to the claimed ink permeable layer. The gloss layer comprises a pigment and a resin, and is porous and ink permeable (page 5, line 43-46). The resin has a glass transition temperature of 40°C or more, preferably 50-100 °C (page 6, line 36). Examples of the resin are polyvinyl alcohol, acrylic, polyurethane, vinyl acetate, vinyl chloride, and acrylamide (page 5, line 56 thru page 6, line 10).

Hasegawa and Asano are analogous art because they are from the same field of endeavor that is the ink jet recording art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the ink permeable layer of Asano with the invention of Iwamoto in order to optimize the porosity of the ink transporting layer which in turn controls the ink absorbing properties of the layer (page 6, lines 36-44 of Asano).

With respect to the hardness value it is elementary that the mere recitation of newly discovered function or property, inherently possessed by things in the prior art, does not cause a claim drawn to those things to distinguish over the prior art. *In re swinehart et al.*, 169 USPQ 226 at 229. Since the Asano reference teaches Applicant's claimed compositional limitations of the ink permeable layer, it is inherent that the reference gloss layer function in the same manner claimed by Applicant. The burden is

upon Applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

### ***Response to Arguments***

5. Applicant's argument is based on that the Office Action has failed to provide a basis in fact and/or technical reasoning to reasonably support that Asano's binder resin inherently has the claimed Shore D hardness. This argument is not found persuasive because the Examiner has provided a technical reasoning to show that Asano's binder resin inherently has the claimed Shore D hardness. The technical reasoning is further elaborated as follow: In view of the specification, the characteristics of the binder to make the claimed ink permeable layer are recited in page 5, lines 3-10, and the examples of binder resins that have those characteristics are disclosed in page 5, lines 11-19. According to the specification, any of the binder resins that are disclosed in page 5, lines 11-19 possess the claimed glass transition temperature ( $T_g$ ) and Shore D hardness. The Examiner searched for any of those binder resins disclosed in page 5, lines 11-19, and even searched for any of those binder resins disclosed in page 5, lines 11-19 along with the claimed  $T_g$ . Therefore, since at least some of Asano's resins are substantially identical to the binder resins disclosed in page 5, lines 11-19, and have the claimed  $T_g$ , Asano's resins inherently possess the claimed Shore D hardness.

For the above reason and since Applicant fails to provide factual evidence showing that Asano's resins do not possess the claimed Shore D hardness, claims 1, 2, 5 and 6 stand rejected. Claim 7 is also included in the rejection because the claimed

particle size and the reason for having the particle size within such a range is taught in Hasegawa col. 4, line 54.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 703-305-0389. The examiner can normally be reached on Mon.-Thur. 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on 703-308-0449. The fax phone numbers



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for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Betelhem Shewareged  
July 9, 2003.

*B.S.*

BRUCE H. HESS  
PRIMARY EXAMINER